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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,588	04/09/2004	William K. Leonard	55476US041	1883

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EXAMINER
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EDWARDS, LAURA ESTELLE

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/821,588

Applicant(s)

LEONARD ET AL.

Examiner

Laura Edwards

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 102/103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being unpatentable over Cheatham (US 2,053,601).

Cheatham teaches a smoothing station for improving uniformity of a wet coating on a substrate having a direction of travel or motion comprising three or more reciprocating pick and place devices (15-20) that rotate in the direction of travel or motion (see pg. 4, lines 3-9 and lines 21-29), the peripheral surfaces of the pick and place devices being at different positions along the substrate, all said positions not being the same (pg. 4, lines 41-51). Even though Cheatham is silent concerning the pick and place devices contacting and recontacting the substrate while smoothing so as to effect different lengths of contact along the coating to improve uniformity, it would have been inherent or in the alternative obvious to one of ordinary skill in the art that the Cheatham smoothing station would enable variations in lengths of contacting and recontacting along the substrate because the smoothing rollers (i.e., pick or place devices) can be driven at different speeds relative to the speed of travel of the web as evidenced by pg 4, lines 22-30. One skilled in the art would recognize and appreciate that different lengths of contacting/recontacting of the coated substrate would be effected via variation in speed of rotation of the smoothing rollers and/or variation in speed of travel of the web or substrate.

With respect to the contacting periods improving uniformity along the longitudinal direction of the travel of the web, the Cheatham device inherently enables uniformity along the direction of travel of the coated web as evidenced by pg. 4, lines 37-41.

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Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheatham (US 2,053,601).

The teachings of Cheatham have been mentioned above but Cheatham does not explicitly teach or suggest at least two or more rollers or pick and place devices being of different sizes. However, because Cheatham recognizes that the rollers can be made in any known fashion so as to include different surfacing material (see col. 4, lines 52-67), one of ordinary skill in the art would appreciate that the sizes and/or diameters of the rollers or pick and place devices would be subject to change so as to be different. The determination of the appropriate size(s) and/or diameter(s) of the rollers due to their material construction (i.e., including felt, cloth, rubber, etc.) to facilitate smoothing of the coating would be within the purview of one skilled in the art.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hall (GB1278099).

Hall teaches an apparatus for improving longitudinal uniformity of a liquid coating on a substrate comprising the combination of at least three or more pick-and-place devices (3; col. 1, lines 41- 46) that rotationally move counter to the direction of travel of the substrate, the pick and place devices periodically contacting the coating and re-contact said coating along lengths of the substrate, the pick and place travel at different positions including the direction of travel of the substrate (see Fig. 3) or the axial direction (see Fig. 4) wherein the pick-and-place devices are out of phase with one another (see claim 5) constituting non-periodically related devices. Even though Hall does not explicitly teach different lengths or distances along which the pick-and-devices contact and recontact the coating on the substrate, one of ordinary skill in the art would

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expect that the contacting distances of lengths would be different because the devices are translated or moved into/out of phase with one another such that the devices are not periodically related along the direction of travel of the substrate. Moreover, the apparatus of Hall can be adjusted such that the amplitude and frequency of the reciprocating motion of the smoothing rollers/ pick and place devices can be varied widely with a reduced amplitude and an increased frequency (see col. 3, lines 19-34) such that a variety of lengths of contacting/recontacting of the coating can result along the coated substrate. With respect to claim 3 and 4, Hall recognizes two or even five pick-and-place devices being (see col. 1, lines 41-46). In addition, all the pick-and-place devices can be moved out of phase with one another such that the devices are not periodically related as evidenced by col. 1, lines 80-89.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall (GB1278099) as applied to claim 1 above, and further in view of Cheatham (US 2,053,601).

The teachings of Hall have been mentioned above and while Hall alludes to reciprocating smoothing rolls or pick and place devices to rotate counter to the direction of the traveling substrate, Hall does not teach or suggest the pick and place devices rotating in a direction of travel of the substrate. However, it was known in the coating art, at the time the invention was made, to configure reciprocating smoothing rollers to rotate optionally in the direction of rotation of the substrate or the opposite direction as evidenced by Cheatham (see col. 4, lines 3-9 and 22-29). In light of the teachings of Cheatham, it would have been obvious to one of ordinary skill in the art to arrange the smoothing rollers or pick and place devices of Hall to rotate in the direction

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of substrate motion as another option in order to create different surface conditions along the length of the coated substrate so to enhance smoothing of the applied coating.

With respect to claims 3 and 4, even though Hall does not teach or suggest at least two or more rollers or pick and place devices being of different sizes. Cheatham recognizes that the rollers can be made in any known fashion so as to include different surfacing material (see col. 4, lines 52-67) such that one of ordinary skill in the art would appreciate that the sizes and/or diameters of the rollers or pick and place devices would be different. In light of the teachings of Cheatham, the determination of the appropriate size(s) and/or diameter(s) of the Hall pick and place devices due to their material construction (i.e., including felt, cloth, rubber, etc.) to facilitate smoothing of the coating would be within the purview of one skilled in the art.

### *Response to Arguments*

Applicants' arguments filed 1/12/06 have been fully considered but they are not persuasive.

Applicants contend that Cheatham does not show or suggest three or more smoothing rollers that contact the wet coating and recontact the wet coating at different positions along the length of the traveling substrate or as claimed, the pick and place devices contacting and recontacting the wet coating at positions on the substrate whose length along the substrate with respect to the first position are NOT all the same.

This argument is not deemed because as the web travels along through the coating apparatus in Cheatham, the smoothing rollers or pick and place devices reciprocate back and forth with respect to the traveling web such that each time a given smoothing roller contacts the

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wet coated moving web, the smoothing rollers will connect with the web at different positions. Applicants should note that Cheatham does not explicitly or implicitly teach that the three or more pick and place devices contact the web coating at a first position on the substrate and re-contact the wet coating at positions on the substrate whose lengths along the substrate with respect to the first position are integer multiples of one another.

Applicants contend that Hall no longer applies to the instantly claimed invention because Hall does not show or suggest three or more smoothing rollers that contact the wet coating and recontact the wet coating at different positions along the length of the traveling substrate or as claimed, the pick and place devices contacting and recontacting the wet coating at positions on the substrate whose length along the substrate with respect to the first position are NOT all the same.

This argument is deemed moot because as the web travels along through the coating apparatus in Hall, the smoothing rollers or pick and place devices reciprocate back and forth with respect to the traveling web such that each time a given smoothing roller contacts the wet coated moving web, the smoothing rollers will connect with the web at different positions. Applicants should note that Hall does not explicitly or implicitly teach that the three or more pick and place devices contact the web coating at a first position on the substrate and re-contact the wet coating at positions on the substrate whose lengths along the substrate with respect to the first position are integer multiples of one another.

Applicants contend that Hall does not teach the smoothing rollers or pick and place devices rotating in the direction of substrate motion. This argument is well taken, however, Cheatham suggests that it is optional to rotate the smoothing rollers or pick and place devices in

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one direction or the other. In light of the teachings of Cheatham, one of ordinary skill in the art would readily appreciate rotating the rollers in the Hall apparatus in either direction for the benefit of smoothing the web coating applied to the traveling web.

Applicants contend that Hall does not teach the smoothing rollers or pick and place devices being of different sizes. This argument is well founded, however, again Cheatham recognizes the smoothing rollers or pick and place devices being made of different surfacing material (see col. 4, lines 52-67) as mentioned above such that one of ordinary skill in the art would appreciate that the sizes and/or diameters of the Hall rollers or pick and place devices would be different. In light of the teachings of Cheatham, the determination of the appropriate size(s) and/or diameter(s) of the Hall pick and place devices due to their material construction (i.e., including felt, cloth, rubber, etc.) to facilitate smoothing of the coating would be within the purview of one skilled in the art.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37



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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura Edwards whose telephone number is (571) 272-1227. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Laura Edwards  
Primary Examiner  
Art Unit 1734

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March 16, 2006